



International Conference  
on Oral Immunology & Oral Microbiology

Theme:

Oral Health for Healthy Living

# PROCEEDINGS ICOIM 2018

Balai Ungku Aziz, Faculty of Dentistry  
University of Malaya

14-15 August 2018



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## Tentative Programme

14 August 2018 | Tuesday | Day 1

Time	Event
08:00 - 08:30	Registration
08:30 - 09:15	Opening Ceremony
09:15 - 10:15	Keynote Address: Prof. Dr. Richard J Lamont, University of Louisville (USA) <i>In Concert: the Synergistic Activities of the Periodontal Microbiota.</i>
10:15 - 10:30	Tea Break
10:30 - 10:45	Photo Session
10:45 - 11:30	Plenary Lecture 1: Prof. Dr. Lakshman Samaranayake, University of Sharjah (UAE) <i>The Oral Microbiome and Systemic Health: The Story So Far.</i>
	Oral Presentation [Presentation 10 min + Q/A 5 min]
	OR 1. Androula Kazoullis: Strain-specific responses of human phagocytic cells to the yeast <i>Candida albicans</i>
	OR 2. Mohammad Arshad Aziz: Evidence for selective mRNA sorting into cancer exosomes
	OR 3. Lahari A. Telang: Improving antibiotic prescribing practices in a dental school – an interventional study
11:30 - 13:00	OR 4. Ziyada Salisa: The relationship of menstrual cycle based on ovarium cycle with periodontal inflammatory severity and calprotectin gingival crevicular fluid level in chronic periodontitis patient
	OR 5. Low Sin Yan: Influence of sucrose on cariogenicity of alpha-haemolytic biofilm-forming <i>Neisseria perflava</i> and <i>Streptococcus tigurinus</i> isolated from dental plaque.
	OR 6. Marina Mohd Bakri: Role of capsaicin in promoting oral health and it's antiproliferative activity in oral cancer
13:00 - 14:00	Lunch / Poster exhibition / Trade booth
14:00 - 14:45	Plenary Lecture 2: Prof. Dr. Onn Haji Hashim, University of Malaya (Malaysia) <i>The Salivary Proteome: Associated Changes in Cancer and Myocardial Infarction.</i>

Oral Presentation [Presentation 10 min + Q/A 5 min]

**Oral Presentation [Presentation 10 min + Q/A 5 min]**

14.45 – 16.00	OR 7. Haizal Mohd Hussaini: Pre-metastatic niche and immune escape mechanism in oral squamous cell carcinoma metastatic lymph nodes
	OR 8. Syarida H Safii: Manuka honey as an adjunct to scaling & root planning in the treatment of chronic periodontitis. a pilot study
	OR 9. Intan A Shahdan: A perspective on the antimicrobial properties of Miswak against polymicrobial infections in the oral cavity
	OR 10. Wong Gou Rean: Low Prevalence of Human Papilloma Virus in Oral Squamous Cell Carcinoma
	OR 11. Mohd Hafiz bin Arzmi: The effect of <i>Candida albicans</i> , <i>Actinomyces naeslundii</i> and <i>Streptococcus mutans</i> biofilm effluent on the expression of interleukin-6 and interleukin-8 from normal and oral cancer cell lines.
16.00 – 17.00	<b>Poster Evaluation Session [all presenters must be present during this time]</b>
17.00 – 17.30	<b>Tea Break</b>
17.30 – 19.00	<b>1<sup>st</sup> Biennial General Meeting MySOMOI [For MySOMOI members only]</b>
19.30 – 22.00	<b>Launching of MySOMOI &amp; DINNER [All participants]</b>

**15 August 2018 | Wednesday | Day 2**

Time	Event
08:00 - 08:30	<b>Breakfast</b>
08:30 - 09:15	<b>Immunology Quiz   First round   Online MCQ</b>
09:15 - 10.00	<b>Plenary Lecture 3: Prof. Dr. Wim Teughels, KU Leuven (Belgium)</b> <i>Dysbiosis and Homeostasis in the Oral Microbial Ecology: Role and Opportunities for Good, Commensal Bacteria.</i>
10:00 – 10:30	<b>Tea Break</b>
	<b>Oral Presentation [Presentation 10 min + Q/A 5 min]</b>
10:30 – 1:30	OR 12. Nurul Fatimah Mohamed Yusoff: <i>Linum usitatissimum</i> antibacterial activity on <i>Pseudomonas aeruginosa</i> in-vitro study
	OR 13. Jesinda P. Kerishnan: Discovery of potential biomarkers in oral squamous cell carcinoma using next generation sequencing technology
	OR 14. Salequl Islam: Type-2 Diabetes Mellitus (T2DM) patients carry different periodontal microbiota
	OR 15. Noratikah bt Awang Hasyim: Oral histoplasmosis in Malaysia: A retrospective analysis of cases reported in Stomatology Unit, Institute for Medical Research during 1995-2016
11.30 – 12.30	<b>ePoster Session</b>
12:30 – 14:00	<b>Lunch / Poster Exhibition / Trade booth</b>
	<b>Oral Presentation [Presentation 10 min + Q/A 5 min]</b>
14:00 – 15:00	OR 16. Siti Zaleha Raduan: Anticariogenic properties of <i>Solanum ferox</i> L. ethanol extract
	OR 17. May Ameen Saeed Alkoshab: Therapeutic role of honey in oral health and its anticancer activity
	OR 18. Kathreena Kadir: Maxillary sinus squamous cell carcinoma with superimposed mycosis: a surgical dilemma
	OR 19. Muhammad Nazirul bin Md Yusoff: A mystery of the ordinary: a case report on recurrent oral ulcers
15:00 – 15:45	<b>Interdisciplinary Lecture: Prof. Dr. Mohammad Tariqur Rahman, UM (Malaysia)</b> <i>Pervasive Pathology of Authorship in the Field of Biomedical Science: To or Not To be Continued?</i>
15:45 – 16:30	<b>Immunology Quiz   Final round [Top five winners from the 1<sup>st</sup> round will face final round of questions on the stage]</b>
16.30 – 17:00	<b>Prize giving and Closing Remarks</b>

**Secretariat,**

International Conference on Oral Immunology and Oral Microbiology (ICOIOM) 2018

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## The effect of *Candida albicans*, *Actinomyces naeslundii* and *Streptococcus mutans* biofilm effluent on the expression of interleukin-6 and interleukin-8 from normal and oral cancer cell lines

Oral : OR-11  
Date : 14/08  
Session : 15<sup>45</sup>-16<sup>00</sup>

Mohd Hafiz Arzmi<sup>1,2\*</sup>, Stuart Dashper<sup>2</sup>, Nicola Cirillo<sup>2</sup>, Neil O'Brien-Simpson<sup>2</sup>, Michael McCullough<sup>2</sup>

<sup>1</sup>Department of Fundamental Dental and Medical Sciences, Kulliyah of Dentistry, International Islamic University Malaysia, Kuantan Campus, Pahang.

<sup>2</sup>Melbourne Dental School, The University of Melbourne, Victoria, Australia

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Oral cancer is the sixth most common cancer worldwide. It is suggested that polymicrobial infection may involve in oral carcinogenesis. This study aimed to determine the effect of mono-culture and polymicrobial biofilms effluent from *C. albicans*, *Streptococcus mutans* and *Actinomyces naeslundii* to the expression of Interleukin-6 (IL-6) and Interleukin-8 (IL-8) from normal and oral squamous cell carcinoma (OSCC) cell lines, with the hypothesis that biofilm effluent promote oral carcinogenesis. OKF6 cell line isolated from healthy oral cavity was grown to 80% confluent in 12-well plate and incubated with 80% (v/v) serum free medium (SFM) containing biofilm effluent from mono-culture of *C. albicans* (ALC3), *S. mutans* (SM), *A. naeslundii* (AN) or polymicrobial (TRI) for 2 h and 24 h. Incubation of the cell line with 100% SFM (NE) was conducted to represent the negative control. To quantify the amount of IL-6 and IL-8 secreted by epithelial cells in response to biofilm effluent, the conditioned medium was col-

lected and analysed using Bio-Plex protein array system and Bio-Rad cytokine multi-plex panel. Similar protocol was repeated with H357 cell line that was isolated from patient with OSCC. The results showed that OKF6 cell line that was incubated with ALC3 had significant decrease IL-8 expression while incubation with SM exhibited significantly increase IL-6 expression when compared to NE after 2 h incubation ( $P < 0.05$ ). In addition, significant increase of IL-6 and IL-8 expression were observed after 24 h incubation of OKF6 cell line with TRI effluent when compared to NE ( $P < 0.05$ ). The incubation of H357 with AN, SM and TRI effluent exhibited significant increase of IL-6 and IL-8 expression after 2 h incubation, whereas significant increase of the similar cytokines were observed when incubated with all effluent after 24 h in comparison to NE ( $P < 0.05$ ). In conclusion, biofilm effluent promotes malignant phenotype of OSCC cell line.

## *Linum usitatissimum* antibacterial activity on *Pseudomonas aeruginosa* in-vitro study

Oral : OR-12  
Date : 15/08  
Session : 10<sup>30</sup>-10<sup>45</sup>

Nurul Fatimah Mohamed Yusoff<sup>2\*</sup>, Basma Ezzat Mustafa<sup>1</sup>, Pram Kumar A/L Subramaniam<sup>1</sup>, Nazih Shaban Mustafa<sup>1</sup>, Muhannad Ali Kashmoola<sup>1</sup>, Khairani Idah Mokhtar<sup>1</sup>, Deny Susanti Darnis<sup>2</sup>.

<sup>1</sup>Kulliyah of Dentistry; <sup>2</sup>Kulliyah of Science, International Islamic University Malaysia, Kuantan Campus, Pahang.

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Flaxseed comes from the flax plant (*Linum usitatissimum*), which has been cultivated for domestic use since prehistoric times. *Pseudomonas aeruginosa* is a Gram-negative bacterium has the ability to survive in adverse environments and develop multiple antibiotic resistance mechanisms. This study aims to evaluate the susceptibility of *Pseudomonas aeruginosa* (*P. aeruginosa*) in vitro to the ethanolic extract obtained from flax seed. This is a laboratory experimental in vitro study using *P. aeruginosa* cultured in nutrient agar. The pathogen then was inoculated in nutrient based broth and incubated for 24 hours. Flaxseed extract efficacy was tested by measurement of the zone of inhibition. The result of the extracts antimicrobial activities were compared with streptomycin as

positive control and DMSO as negative control. The statistical analysis was done by using SPSS19. There is positive antibacterial effects of flaxseed extract against *Pseudomonas aeruginosa* and it was comparable in efficacy to that of streptomycin. This study concludes that flaxseed extract can help in inhibiting *Pseudomonas aeruginosa* activity. The implication of this result will be useful in propagating the use of natural based product as therapeutic drug against the chemical synthetic products. The results of the present study scientifically validate the inhibitory capacity of *Linum usitatissimum* as antibiotic against one of the most resistant pathogens and contribute towards the development of new treatment options based on natural products.

# List of Presenters



ID	Category	Name	Institution
OR-01	Oral	Androula Kazoullis	University of Queensland
OR-02	Oral	Mohammad Arshad Aziz	University of Otago
OR-03	Oral	Lahari A. Telang	Penang International Dental College
OR-04	Oral	Ziyada Salisa	Jenderal Soedirman University
OR-05	Oral	Low Sin Yan	Universiti Tunku Abdul Rahman
OR-06	Oral	Marina Mohd Bakri	University of Malaya
OR-07	Oral	Haizal Mohd Hussaini	University of Otago
OR-08	Oral	Syarida Hasnur Safii	University of Malaya
OR-09	Oral	Intan Azura Shahdan	International Islamic University Malaysia
OR-10	Oral	Wong Gou Rean	University of Malaya
OR-11	Oral	Mohd Hafiz bin Arzmi	International Islamic University Malaysia
OR-12	Oral	Nurul Fatimah Binti Mohamed Yusoff	International Islamic University Malaysia
OR-13	Oral	Jesinda P. Kerishnan	University of Malaya
OR-14	Oral	Salequl Islam	Jahangirnagar University
OR-15	Oral	Noratikah bt Awang Hasyim	University of Malaya
OR-16	Oral	Nanda Rachmad Putra Gofur	Universitas Brawijaya
OR-17	Oral	Siti Zaleha Raduan	Universiti Malaysia Sarawak
OR-18	Oral	May Ameen Saeed Alkoshab	University of Malaya
OR-19	Oral	Kathreena Kadir	University of Malaya
OR-20	Oral	Muhammad Nazirul Bin Md Yusoff	University of Malaya
P-01	Poster	Ayu Fresno Argadianti	Universitas Airlangga
P-02	Poster	Hasrul Husain	Universitas Airlangga
P-03	Poster	Mohamed A A Jasem Alzubaidi	University of Malaya
P-04	Poster	Meilia Aquina Hakim	Universitas Airlangga
P-05	Poster	Shohei Matsui	Showa University
P-06	Poster	Nur Tsurayya Priambodo	Universitas Airlangga
P-07	Poster	Eben Ezer Lebang, drg	Universitas Airlangga
P-08	Poster	Titis Desiandrin	Universitas Airlangga
P-09	Poster	Novitasari	Universitas Airlangga
P-10	Poster	Wan Shahrman Yushdie b. Wan Yusoff	Universiti Putra Malaysia
P-11	Poster	Anis Rageh Mohammed Al-Maleki	University of Malaya
P-12	Poster	Zaleha Binti Shafiei	Universiti Kebangsaan Malaysia
P-13	Poster	Normaliza Ab Malik	Universiti Sains Islam Malaysia
P-14	Poster	E V Soma Sekhar Goud	Mahsa University
EP-01	ePoster	Reiska Kumala Bakti	Universitas Airlangga
EP-02	ePoster	Hening Tuti Hendarti, drg., M.S., Sp.PM	Universitas Airlangga
EP-03	ePoster	Desiana Radithia	Universitas Airlangga
EP-04	ePoster	Chui Ping Lei	University of Malaya
EP-05	ePoster	Bagus Soebadi, drg., MHPed., Sp.PM(K)	University of Malaya
EP-06	ePoster	Adiastuti Endah P., drg. M.Kes, Sp.PM	Universitas Airlangga
EP-07	ePoster	Lakshmi Magesh	Saveetha Dental College & Hospitals
EP-08	ePoster	Anitha Roy	Saveetha Dental College and Hospitals
EP-09	ePoster	Geetha R V	Saveetha Dental College and Hospitals
EP-10	ePoster	Nurina Febriyanti Ayuningtyas	Universitas Airlangga
EP-11	ePoster	Saka Winias	Universitas Airlangga
EP-12	ePoster	Ghasak Ghazi Faisal	International Islamic University Malaysia

Dr. Hafiz (KOD)

(KOD)